IN THE CLAIMS:

Claims 1 through 20 are currently pending in this application. Please amend Claims 1, 6, 11, 15 and 17, as follows:

1. (Currently Amended) A packet switching apparatus with a plurality of pairs of input/output ports, the packet switching apparatus for forwarding packets received to their destination, based on a session as a point-to-point connection set up between a terminal and a destination network, comprising:

a pathfinding table for containing entries on a plurality of entry lines, to which, route information to be known when a first packet of a session is received and associated output information including the identifier of an output port through which to send out the packet received, the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network, and the identifier of an output session are defined; and

a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received, performs processing for the received packet, according to packet output route information specified on the searched out entry line, and sends out the received packet through the output port identified by the output port identifier on said specific entry line,

wherein each of the entries of the pathfinding table contains a correspondence among an identifier of an input tunnel of an input packet, an identifier of an input session of the input packet, and an identifier of an output port of the input packet.

2. (Original) The packet switching apparatus according to claim 1, wherein said apparatus handles packets to be transmitted through said session or sessions based on a Point to Point Protocol (PPP).

3. (Original) The packet switching apparatus according to claim 1, wherein said apparatus handles packets to be transported through output tunneling based on a Layer 2 Tunneling Protocol (L2TP).

4. (Original) The packet switching apparatus according to claim 1, wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP.

5. (Original) The packet switching apparatus according to claim 1, wherein said apparatus handles packets transported through input tunneling based on Generic Routing Encapsulation (GRE).

6. (Currently Amended) A packet switching apparatus connected to a plurality of networks, each network using a specific communication protocol for transmitting packets across it, said packet switching apparatus for forwarding packets received to their destination, based on a session as a point-to-point connection set up between a terminal and a destination network, comprising:

a plurality of input line interface units, each connecting to at least one input line and carrying out protocol processing in compliance with the OSI Reference Model, at least Layer 1, for packets input through said input line;

a plurality of output line interface units, each connecting to at least one output line and carrying out protocol processing in compliance with the OSI Reference Model, at least Layer 1, for packets to be output over said output line;

a plurality of input session processing units, each connecting to at least a plurality of input line interface units and carrying out session or tunnel processing for packets received from the input line interface units;

a plurality of output session processing units, each connecting to at least a plurality of output line interface units and carrying out session or tunnel processing for packets to be transferred to the output line interface units;

a switch unit that carries out packet switching from the plurality of input session processing units to the plurality of output session processing units;

a control unit connecting to said plurality of input line interface units, said plurality of output line interface units, said plurality of input session processing units, said plurality of output session processing units, and said switch unit and has control over them;

a pathfinding table for containing entries on a plurality of entry lines, to

which, route information to be known when a first packet of a session is received and associated output information including the identifier of an output port through which to send out the packet received, the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network, and the identifier of an output session are defined; and

a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received, performs processing for the received packet, according to packet output route information specified on the searched out entry line, and sends out the received packet through the output port identified by the output port identifier on said specific entry line,

wherein each of the entries of the pathfinding table contains a correspondence among an identifier of an input tunnel of an input packet, an identifier of an input session of the input packet, and an identifier of an output port of the input packet.

7. (Previously Presented) The packet switching apparatus according to claim 6, wherein said apparatus handles packets to be transmitted through said session based on a Point to Point Protocol (PPP).

8. (Previously Presented) The packet switching apparatus according to claim 6, wherein said apparatus handles packets to be transported through tunneling based on a Layer 2 Tunneling Protocol (L2TP).

9. (Previously Presented) The packet switching apparatus according to claim 6, wherein said apparatus handles packets to be transported through tunneling based on a Mobile IP.

10. (Previously Presented) The packet switching apparatus according to claim 6, wherein said apparatus handles packets to be transported through tunneling based on Generic Routing Encapsulation (GRE).

11. (Currently Amended) A packet switching apparatus with a plurality of pairs of input/output ports, said packet switching apparatus for forwarding packets received to their destination, based on a session as a point-to-point connection set up between a terminal and a destination network, comprising:

a pathfinding table for containing entries on a plurality of entry lines, to which input information to be known when a first packet of a session is received including the identifier of an input port, the identifier of an input tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network, and the identifier of an input session and associated information about the identifier of an output port through which to send out the packet received are defined; and

a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received, performs processing for the received packet, according to packet output route information specified on the searched out entry line, and sends out the received packet through the output port identified by the output port identifier on said specific entry line,

wherein each of the entries of the pathfinding table contains a correspondence among an identifier of an input tunnel of an input packet, an identifier of an input session of the input packet, and an identifier of an output port of the input packet.

12. (Previously Presented) The packet switching apparatus according to claim 11, wherein said apparatus handles packets to be transmitted through said session or sessions based on a Point to Point Protocol (PPP).

13. (Previously Presented) The packet switching apparatus according to claim 11, wherein said apparatus handles packets transported through input tunneling based on a Layer 2 Tunneling Protocol (L2TP).

14. (Previously Presented) The packet switching apparatus according to claim 11, wherein said apparatus handles packets transported through input tunneling based on a Mobile IP.

15. (Currently Amended) A packet switching apparatus with a plurality of pairs of input/output ports, the packet switching apparatus for forwarding packets received to their destination, based on a session as a point-to-point connection set up between a terminal and a destination network, comprising:

a pathfinding table for containing entries on a plurality of entry lines, to which route information to be known when a first packet of a session is received and associated information about the identifier of an output port through which to send out the packet received are defined; and

a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received, performs processing for the received packet, according to packet output route information specified on the searched out entry line, and sends out the received packet through the output port identified by the output port identifier on said specific entry line,

wherein each of the entries of the pathfinding table contains a correspondence among an identifier of an input tunnel of an input packet, an identifier of an input session of the input packet, and an identifier of an output port of the input packet.

16. (Previously Presented) The packet switching apparatus according to claim 15, wherein said apparatus handles packets to be transmitted through said session or sessions based on a Point to Point Protocol (PPP).

17. (Currently Amended) A packet switching apparatus connected to a plurality of networks, each network using a specific communication protocol for transmitting packets across it, the packet switching apparatus for forwarding packets received to their destination, based on a session as a point-to-point connection set up between a terminal and a destination network, and the packet switching apparatus comprising:

a pathfinding table for containing entries on a plurality of entry lines, to which, route information to be known when a first packet of a session is received and associated output information including the identifier of an output port

through which to send out the packet received, the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network, and the identifier of an output session are defined; and

a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received, performs processing for the received packet, according to packet output route information specified on the searched out entry line, and sends out the received packet through the output port identified by the output port identifier on said specific entry line, and wherein:

even when the terminal moves, leaving the area of a network and entering the area of another network among said plurality of networks, said packet switching apparatus continues to forward packets it received through the existing point-to-point session handed over to the network where the terminal now stays only by changing the output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network,

wherein each of the entries of the pathfinding table contains a correspondence among an identifier of an input tunnel of an input packet, an identifier of an input session of the input packet, and an identifier of an output port of the input packet.

18. (Previously Presented) The packet switching apparatus according to claim 17, wherein said apparatus handles packets to be transmitted through said session or sessions based on a Point to Point Protocol (PPP).

19. (Previously Presented) The packet switching apparatus according to claim 17, wherein said apparatus handles packets to be transported through output tunneling based on a Layer 2 Tunneling Protocol (L2TP).

20. (Previously Presented) The packet switching apparatus according to claim 17, wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP.